reacting the reaction product with $R^1OC_6H_4CH_3$ where $R^1$ is selected from the group consisting of Na, K, H and Li to produce an alkali phenoxy sulfonimide functionalized polyphosphazene of the formula $[NP(OC_6H_4SO_2NR^1SO_2R_f)_x(OC_6H_4CH_3)_{2-x}]_n$.

38(new). The method of claim 37 wherein $R^1$ is Na.

39(new). A sulfonimide functionalzied polyphosphazene homopolymer of the formula $[NP(OC_6H_4SO_2NR^2SO_2R_f)_2]_n$ where $R^1$ is selected from the group consisting of Li, Na, H and K.

40(new). The homopolymer of claim 39 wherein $R^1$is Na.

41(new). A method of manufacture of a sulfonmide functionalzied polyphosphazene homopolymer of the formula $[NP(OC_6H_4SO_2NR^1SO_2R_f)_2]_n$ where $R^1$ is selected from the group consisting of Li, Na, H, and K and , $R_f$ is a $C_1$-$C_8$ perfluoroalkyl, comprising,

reacting $(NPCl_2)_n$, where $n \geq 3$ with $R^1OC_6H_4NR^1SO_2R_f$ where $R^1$ is selected from the group consisting of Li, K and Na and , $R_f$ is a $C_1$-$C_8$ perfluoroalkyl, at a temperature of about 60 °C to about 200 °C at a pressure of about ambient to about 12 bar for about 12 hours to about 40 hours.

42. (new)hc method of claim 41 wherein $R^1$ is Na.

43(new). A phenoxy sulfonimide functionalized polyphosphazene copolymer of the formula $[NP(ZR^2)_x(ZC_6H_4SO_2NR^1SO_2R_f)_{2-x}]_n$, where , $R_f$ is a $C_1$-$C_8$ perfluoroalkyl, where $R^2$ is selected from the group consisting of $-CH_2CH_3$, $-C_6H_4CH_3$, $-CH_2CH_2OCH_2CH_2OCH_3$, $-CH_2CH_2OTHP$, $-C_6H_4COOPr$, $-CH_2CF_3$, $-CH_2CF_2OCF_2CF_2OCF_3$, $-C_6H_4CF_3$, $-C_6F_5$, and mixtures thereof, Z is O or NH, and $R^1$ is selected from the group consisting of Na, Li, H, and K.

44(new). The copolymer of claim 43 wherein $R^2$ is $-C_6H_4CH_3$, and Z is -O-.

45(new). The copolymer of claim 43 wherein $R^1$ is Na.

46(new). A method of making a phenoxy sulfonimide functionalized polyphosphazene copolymer of the formula $[NP(ZR^2)_x(ZC_6H_4SO_2NR^1SO_2R_f)_{2-x}]_n$, where , $R_f$ is a $C_1$-$C_8$ perfluoroalkyl, where $R^2$ is selected from the group consisting of $-CH_2CH_3$, $-C_6H_4CH_3$, $-CH_2CH_2OCH_2CH_2OCH_3$, $-CH_2CH_2OTHP$ where THP is tetrahydropyranl, $-C_6H_4COOPr$, $-CH_2CF_3$, $-CH_2CF_2OCF_2CF_2OCF_3$, $-C_6H_4CF_3$, $-C_6F_5$, Z is O or NH, and $R^1$ is selected from the group consisting of Na, Li and K, comprising,

reacting $(PNCl_2)_n$, where $n \geq 3$ with a first amount of compound of the formula $R^3R^2$ where $R^3$ is selected from the group consisting of -NaO, -LiO, -KO, $NH_2$ or mixtures thereof, $R^2$ is selected from the group consisting of $-CH_2CH_3$, $-C_6H_4CH_3$, $-CH_2CH_2OCH_2CH_2OCH_3$, $-CH_2CH_2OTHP$ where THP is tetrahydropyranyl, $-C_6H_4COOPr$, $-CH_2CF_3$, $-CH_2CF_2OCF_2CF_2OCF_3$, $-C_6H_4CF_3$, $-C_6F_5$, or mixtures thereof, with a second amount of a compound of the formula $R^2C_6H_4SO_2NHSO_2R_f$ where $R_f$ is a $C_1$-$C_8$ perfluoroalkyl, where $R^2$ is selected from the group consisting of -NaO, -LiO, -KO, NH or mixtures thereof, at a first temperature of about 60 °C to about 200 °C to produce a reaction product,

reacting the reaction product with $R^3R^2$ at a second temperature of 60 °C to about 200 °C at a pressure of about 3.5-4 bar.

47(new). A haloalkoxy sulfonimide functionalized polyphosphazene of the formula $(NP(OCH_2(CF_2)_4H)_2)_x$ $(NP(OCH_2(CF_2)_4H)OC_6H_4SO_2NR^1SO_2R_f)_{(1-x)}$ where $R^1$ is selected from the group consisting of Na, Li, H, and K, and where $R_f$ is a $C_1$-$C_8$ perfluoroalkyl.

48(new). The haloalkoxy sulfonimide functionalized polyphosphazene of claim 47